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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,404	10/18/2001	Hiromi Okitsu	51270-277015	8098

7590 11/26/2003

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EXAMINER

NOLAN, DANIEL A

ART UNIT	PAPER NUMBER
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2654

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DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,404

Applicant(s)

OKITSU, HIROMI

Examiner

Daniel A. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5,7,9,11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5,7,9,11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Because the language of certain claims is written in the manner prescribed to determine the equivalents of the element, as required by 35 U.S.C. 112, 6th paragraph, including listing the means in the specification where indicated, but since further limitations are listed with the claims, the Examiner is proceeding with the understanding that such claims are not intended to be examined as "means plus function" claims. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

Drawings

2. The proposed drawing corrections were received on 18 October 2001.

These drawings are accepted with the objections cited below.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following process not mentioned in the description:

- Figure 1 depicts communication directly from the remote transceiver (70) to the host controller (40) avoiding the transceiver (70) connected to that controller.
- Because controller (40) requires transceiver (70) to communicate, the Examiner is proceeding with the understanding that connection 80→40 will be replaced with a connection from 70→40.

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4. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Response to Amendment

5. The preliminary amendment filed 18 October 2001 was entered to the following effect:

- The title was changed as indicated.
- The specification was changed as indicated.
- Claims 1, 2, 6, 8, 10 and 12 were cancelled.
- The remaining claims were changed as indicated, and
- Claims 14 and 15 were added.

Specification

6. The abstract of the disclosure is objected to because it exceeds 150 words. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because “- - pattern that - -” should be two words (5th line from end page 16). Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Launey et al & Flanagan et al

9. Claims 3-5, 7, 9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Launey et al (U.S. Patent 5,086,385 A) in view of Flanagan et al (U.S. Patent 5,737,485).

10. Regarding claim 3, the invention for an expandable home automation system by Launey et al reads on the feature of the claim for *an information apparatus for notifying output information to a remote terminal in response to an input signal of a sound*, as follows:

- Launey et al (with table 6 – see column 52 lines 36-47) reads on the feature of a 1st *memory block configured to store characteristic data representing characteristics of various sounds* (i.e. *.voc in lines 62-66) and a 2nd *memory block configured to store various items of output information in correspondence to the characteristic data of the various sounds* (i.e. *sct – speech control – and *.img in lines 59-62 & 67 through

column 52 line 4). This structure conforms to the well-known practice of partitioning computer memory into discrete areas of *logical memory blocks*, thereby *such that each one of the items of the output information is associated to each sound* (see again column 53 line 2).

- Launey et al (10 in figure 1) further reads on a *controller device that operates according to the extracted characteristic data for addressing the 1st memory block and the 2nd memory block* (described above, to enable operation in column 13 lines 13-18) *to identify one of the items of the output information corresponding to the collected sound* (column 13 lines 42-66);
- Launey et al (column 15 lines 37-43) also reads on the feature of a *transmitter device that transmits the identified one of the items of the output information to the remote terminal* (column 7 lines 57-62) *together with the detected source location of the sound* (column 15 line 44), *location* in some form – including circuit or channel employed – is an obvious and well-known distinguishing feature used to differentiate between similar devices in different locations.
- Where Launey et al employs a plurality of input devices (*microphones* 64 in figure 1) throughout the structure, these devices are intended to provide reception coverage for sounds from *multiple sources* and so do not apply on the feature of *collecting from a single source*.

The *microphone arrays and neural networks for speech/speaker recognition systems* of Flanagan et al (2 in figure 1) reads on the feature of a *plurality of input devices that are spatially distributed to collect the sound from a source location, and*

that respectively provide input signals of the same sound and (column 9 lines 48-50) a detector device that processes the input signals provided from the spatially distributed input devices to detect the source location of the sound and including an analyzer device (4 in figure 1) that extracts characteristic data from at least one of the input signals of the collected sound (16 in figure 1);

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Flanagan et al to the device/method of Launey et al so as to mitigate environmental interference related to reverberation, ambient noise and mismatch between training and testing conditions.

11. Regarding claim 4, the limits of the claim are the same as those for claim 3. Launey et al (operating figure 15b in accord with column 28 lines 55-58) reads on the feature of *a canceller device configured to check whether the output information associated to the sound is true or false (for example, see 878 in figures 8b-c) according to the source location of the sound (for example, see 792→794 in 7d and 412-424→figure 7m), and to cancel transmission of the output information if the output information is false.*

12. Regarding claim 5, the limits of the claim are the same as those for claim 3. Launey et al does not disclose the details of audio recognition, so is silent as to the analyzer device. Flanagan et al (column 9 line 61 – column 10 line 13) reads on the

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feature where the analyzer device is configured to analyze a frequency spectrum of the sound to extract therefrom a characteristic pattern (or "network" of figure 9) which is stored as the characteristic data in the 1st memory block (with the "save" result of figure 9), and the controller device is configured to use the characteristic pattern as an index to identify the one of the items of the output information corresponding to the sound (see 14→4 in figure 11 with column 12 lines 1-2).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Flanagan et al to the device/method of Launey et al so as to be able to determine whether a previously trained subject spoke the utterance.

13. Regarding claim 7, the limits of the claim are the same as those for claim 3. Launey et al teaches the features of *a receiver device configured to receive the output information transmitted from the information apparatus (column 15 lines 30-33); a stimulator device, (with either the spoken messages of column 23 line 48 to column 24 line 9, and/or the monitor 56 of figure 1) that is activated when the output information is received by the receiver device for physically stimulating a user of the remote terminal to draw attention of the user to the output information (see column 9 line 65 through column 10 line 2); such monitor being a display device that is configured to display the received output information such that the stimulated user can readily read the output information.*

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14. Regarding claim 9, Launey et al teaches the feature of *addressing the 1st memory and the 2nd memory based on the extracted characteristic data so as to identify one of the items of the output information corresponding to the collected sound with the disclosure of table 6 (cited in response to claim 3), where the files in the logical memory blocks of "*.sct" data and "*.img" commands operate in correspondence to the counterparts in the "*.voc" (column 52 lines 57-58, 67-68 & 63-66, respectively);*

The remaining features of the claim are the same as those found in claim 3 and the claim is rejected for the same reason.

15. Regarding claim 11, Launey et al (column 13 lines 67 through column 14 lines 3) teaches the feature of *the medium containing program instructions executable by the central processing unit for causing the information apparatus to perform a process of notifying output information to a remote terminal in response to an input signal of a sound*. The remaining features of the claim are the same as those found in claims 3 and 9, and the claim is rejected for the same reasons.

16. Regarding claim 13 as understood by the Examiner, the features are the same as those found in claims 3 and 9, and the claim is rejected for the same reasons.

17. Regarding claim 14 as understood by the Examiner, Launey et al does not speak to the process of training or recognition; Flanagan et al (with the switch of 19 figure 1) teaches the feature of *a recognition mode of operation and a registration mode of*

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operation, and said remote terminal includes a means for allowing a user to remotely select and set said mode of operation of said information apparatus.

The remaining features of the claim are the same as those found in claims 3 and 9, and the claim is rejected for the same reasons.

Launey et al, Flanagan et al & Seidl

18. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Launey et al in view of Flanagan et al and further in view of Seidl ("Lighthouse™ for Windows – On-line Help screenprints", Seidl Computer Engineering, Inc. © 1993).

19. Regarding claim 3, the invention for an expandable home automation system by Regarding claim 15, Launey et al reads on the feature that *the remote terminal is configured to display the output information in a format selected from the group consisting of text* (column 51 lines 41-7), *graphics* (column 51 line 16), *images* (the "*.icn" files of column 52 line 56). Since the table 6 (column 52 line 44-68) is provided as an *example*, and despite the well-known graphic display types of multimedia such as *.avi, *.mpg and the like being available for common use, neither Launey et al nor Flanagan et al disclose the use of motion in the display.

Seidl (last page 8 of the Lighthouse excerpts) reads on the feature of *motion picture and combinations thereof* with their product in which the images change to reflect the operation of the devices, such that it would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply

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the method/teachings of Seidl to the device/method of Launey et al & Flanagan et al so as to reflect the actual state of the device by providing the element of *motion* to the pictures disclosed by Launey et al such that, with the figures 10c-d (where the hands of the clock would move in accord with a setting by voice), figures 10e-f (where the moon phase would be expected to move as the time is set) and figures 12c-12f (where the symbols for lights, screen and etc. change as is done by Seidl).

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Che et al (U.S. Patent 5,737,485 A) speech signal processing method for recognition system with distant-talking user - using microphone array and neural network to mitigate environmental interference introduced by reverberation, ambient noise and channel mismatch between training and testing conditions.
- Lemelson (U.S. Patent 4,856,066 A) speech communication system and method.
- Bowen (U.S. Patent 5,561,737) voice activated switching system for communications - uses voting algorithm to select activation of appropriate microphones based upon number of speakers.
- Chiba (U.S. Patent 5,675,709 A) efficiently processing digital sound data in accordance with index data of feature quantities of the sound data.
- Gillespie ("Plato™ HouseLinc – On-line Help") Smartlink, Tom Gillespie © 1997) whereby the icons representing the voice-controlled devices move (as, a fan spins, fireplace flickers, etc.) reflecting the state of a device at any given moment.

21. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,

or mailed to: P.O. Box 1450
Alexandria, VA 22313-1450

or hand-deliver to: Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan
Examiner
Art Unit 2654

DAN/d
November 21, 2003

A handwritten signature in black ink, appearing to be 'Daniel A. Nolan', written over a horizontal line.

**DANIEL NOLAN
PATENT EXAMINER**